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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,906	02/12/2004	Jonathan James DeMent	AUS920030581US1	6085

7590

08/10/2006

Gregory W. Carr
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EXAMINER

SCHLIE, PAUL W

ART UNIT	PAPER NUMBER
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2186

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/777,906	Applicant(s) DEMENT ET AL.	
	Examiner Paul W. Schlie	Art Unit 2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-11,13-15,17-20,22-24,26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) 3,7,12,16,21,25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-11,13-15,17-20,22-24,26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-2, 4-6, 8-11, 13-15, 17-20, 22-24 and 26-27 have been examined as amended, with claims 3, 7, 12, 16, 21 and 25 being canceled.

Response to Arguments

2. Applicant's arguments filed 6/16/06 have been fully considered but they are not persuasive, or moot based upon the claim's refined rejection in acknowledgment that Peng arguably taught away from some aspects of the claimed invention.

As per the applicant's arguments that Willis does not teach the transformation of an Effective to Real Address translation associated with a thread; as the terms Effective Address and Real Address are considered to be logically equivalent to the terms Virtual Address and Physical Address correspondingly within the context of that taught by the Willis, all teachings are considered to be correspondingly equivalent.

As per the applicant's arguments regarding Willis not teaching the re-utilization of an existing ERAT (TLB) entry in the circumstance where a desired entry is otherwise equivalent to an existing entry with the exception that an existing entry has not been marked valid for a desired thread; which is considered to represent the basis of the invention disclosed by the Willis, although acknowledged that the Willis further teaches that any entry may also be marked non-sharable, thereby being prevented from being shared if desired; the two are considered otherwise equivalent, and thereby clearly taught by Willis (see paragraphs [0059] and [0060]).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 19-20 22-24 and 26-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As a computer program product is not considered directed to statutory matter unless structured to effectively comprise "a computer executable program stored on a computer readable media, which when executed performs ...".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4-6, 8-11, 13-15, 17-20, 22-24 and 26-27 are rejected under 35 U.S.C. 102(b) as anticipated by Willis et al. (US 2002/0144079).

As per independent claims 1, 10 and 19, Willis et al. teaches a method and/or apparatus for sharing translation look-aside buffer (TLB) entries among multiple logical processors (ergo multiple concurrent threads of execution within a single physical multi-threaded processor) comprising a valid indicator for each concurrent thread of execution along with a single virtual/effective address tag and corresponding physical/real address for each TLB entry, such that such entries may be maintained by computer program code to be consistent with the defined address mapping of said multiple threads of execution (see abstract, figures 7a-b 9a-c, paragraphs 52, 61, and claim 35). Further,

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Willis is considered to teach the re-utilization of an existing ERAT (TLB) entry in the circumstance where a desired entry is otherwise equivalent to an existing entry with the exception that an existing entry has not been marked valid for a desired thread, where although Willis teaches that any entry may also be marked non-sharable, thereby being prevented from being shared if desired; the two are considered otherwise equivalent, and thereby all elements are considered clearly taught (see paragraphs [0059] and [0060]).

As per claims 2, 4-6, 8-9, 11, 13-15, 17-18, 20, 22-24 and 26-27, being dependent on claim 1, 10, 19, or correspondingly dependent claim inclusively, Willis et al. is considered to explicitly and/or implicitly teach the entirety the claimed invention although claimed in different form.


Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul W. Schlie whose telephone number is 571-272-6765, or whose email address is [paul.schlie@uspto.gov]. The examiner can normally be reached on Mon-Thu 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on 517-272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


PIERRE BATAILLE
PRIMARY EXAMINER
8/2/06